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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/357,220	07/20/1999	YOSHIKAZU OCHI	450100-4991	8900
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FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			EXAMINER TRAN, NHAN T	
			ART UNIT	PAPER NUMBER
			2615	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/357,220

Applicant(s)

OOCHI, YOSHIKAZU

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/12/2006 & 12/13/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/12/2006 & 12/13/2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-6, 9 & 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 1-6 are objected to because *each* of these claims recites the limitations "encoding the image" and "recording the image" at the amended portions. These limitations should be respectively changed to -- encoding the image **sensing signal** -- and -- recording the image **sensing signal** -- to provide consistent claim terminology.

It is also noted that the claim terminology "sensing-signal" and "sensing signal" currently used throughout all present claims should be used in *either* form but not both to provide consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 9 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US 6,614,477 B1) in view of Kawamura et al (US 5,767,903) and in further view of Inuiya (US 6,222,986 B1)

Regarding claim 1, Lee discloses a video camera apparatus (Figs. 4 & 5) for capturing video images as frames, the apparatus comprising:

a solid image sensor (CCD 42) having an electronic shutter for outputting an image-sensing signal in a frame scan mode, said solid image sensor including a plurality of pixel sensors configured to process charges accumulated on the pixel sensors as the image-sensing signal (see Fig. 4, col. 3, line 35 – col. 4, line 31), wherein the frame scan mode, the charges accumulated and stored for a first field of a particular frame are discharged before the charges accumulated for a second field of the particular frame are stored (see Fig. 3 and col. 3, line 49 – col. 4, line 8, wherein all charges in the first field of a frame are discharged by shutter discharge pulse before charges of the second field are accumulated and stored in the CCD 42 at exposure

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interval in 30 frames/sec scan); wherein the stored charges of the second field are read out in next two fields of a subsequent frame (see Fig. 3 and col. 3, line 49 – col. 4, line 31 and note that the stored charges in the photodiodes of CCD 42 are read out in an inherent delay manner causing the readout period to fall into next two fields of subsequent frame in order for the CCD to function as disclosed);

Drive control means (47, 46 shown in Figs. 4 & 5) for controlling the electronic shutter of the solid state image sensor at a field cycle of a standard television system (e.g., 30 frames/sec in NTSC or 25 frames/sec in PAL) as a basic cycle, thereby to output the image sensing signal from the solid state image sensor in the frame scan mode (see col. 4, lines 45-67 and col. 3, lines 49-64).

Lee also discloses in the background of the invention that the image data of the frame scan mode may represent a still image or a sequence of images (col. 1, lines 16-17).

Lee is silent about the frame scan mode being a progressive scan mode. However, as taught by Kawamura, a frame scan mode is also implemented as a progressive scan mode in compliance with NTSC system of 30 frames/sec by controlling electronic shutter pulses to avoid degradation of resolution in a vertical direction (see Kawamura, col. 8, line 56 – col. 9, line 40 and col. 3, lines 5-8).

Therefore, it would have been obvious to one of ordinary skill in the art to implement a still image mode in the video camera for capturing still images in special moments using a progressive scan mode to produce high quality still images with full

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vertical resolution, thereby providing user(s) options to capture either a high-quality still image or conventional video images or both in a single camera apparatus.

Lee and Kawamura do not explicitly disclose encoding means for encoding the image outputted from the solid image sensor and memory means for recording the image which is encoded by said encoding means, wherein when an image is captured for generating a still image that is recorded on said memory means, the progressive scan mode is forcedly set. Such features are taught by **Inuiya**. Inuiya teaches an electronic camera comprising an encoding unit (data compression 25; Figs. 1 & 18) for encoding the image outputted from an image sensor (CCD 100; Fig. 18), a memory unit (memory 28 or tape 8) for recording the image which is encoded by the encoding unit (see Inuiya, col. 14, lines 10-20). Inuiya further teaches that if the shutter release button 43 is pressed to capture a still image during a moving recording mode, a progressive scan mode (i.e., non-interlace or all-pixel scan mode) is forcedly set to record the still image into the memory unit. See Inuiya, col. 17, lines 25-36, col. 6, lines 28-39 and col. 21, lines 23-45.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Lee and Kawamura with Inuiya to arrive at the Applicant's claimed invention so as to provide an electronic video camera capable of obtaining high-quality still images while maintaining compatibility with existing standard of video tape recorders as taught by Inuiya, col. 2, lines 15-20.

Regarding claim 2, see the analysis of claim 1.

Regarding claim 3, see the analysis of claim 1. Lee also discloses that the frame rate is variable by controlling shutter pulse such that the frame rate is less than or **equal** to the field rate which implies the electronic shutter speed of an interlace scan mode as shown in Fig. 3 and col. 2, lines 15-16. The combined teachings of Lee, Kawamura and Inuiya also disclose output means for outputting the image sensing signal in the progressive scan mode based on the shutter speed (see Lee for composite video signal or digital luminance/chrominance signals in Fig. 4 or Kawamura in Fig. 10).

Regarding claim 4, method claim 4 is corresponding to apparatus claim 3 and is analyzed as same as the apparatus claim 3.

Regarding claim 5, see the analysis of claim 1. Although Lee does not explicitly disclose a scan converter for converting the image sensing signal based on progressive scanning, into an interlace scan signal and a recording means for recording the image sensing signal based on progressive scanning or the image sensing signal converted into the interlace scan signal, these features are further taught **Kawamura in col. 9, line 60 – col. 10, line 9**, wherein the progressive image signal is converted into interlace scan signal and store in the memory 50 by the memory controller 52 so that the converted image signal can be displayed on a conventional NTSC display.

Therefore, it would have been obvious to one of ordinary skill in the art to convert progressive scan image signal into interlace scan signal and store the converted signal

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into a memory for enabling the user to view the image on a conventional NTSC display device without requiring a special display device, thereby user convenience would be realized.

Regarding claim 6, method claim 6 is corresponding to apparatus claim 5 and is analyzed as same as the apparatus claim 5.

Regarding claim 9, although Inuiya does not explicitly disclose that the encoding means encodes the image according to JPEG standard, Inuiya clearly discloses that the encoding means applies DCT processing (see Inuiya, col. 14, lines 10-20). An Official Notice is taken that it is well recognized in the art that DCT encoding processing is used in JPEG encoding. Therefore, it would have been obvious to one of ordinary skill in the art to implement JPEG encoding processing as one of DCT algorithms for encoding the still image since the JPEG encoding processing effectively compresses the image for saving more memory spaces compared to other DCT algorithms.

Regarding claim 10, it is clear that the memory means is a removable memory (see Inuiya, Fig. 18, col. 10, line 27, wherein the magnetic tape 8 is removable).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-

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7371. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.


TUAN HO
PRIMARY EXAMINER